

CITY OF CAHOKIA HEIGHTS

SANITARY SEWER SYSTEM

CAPACITY, MANAGEMENT, OPERATION AND MAINTENANCE (CMOM) PROGRAM

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I. INTRODUCTION

The City of Cahokia Heights has developed a collection system's Capacity, Management, Operation, and Maintenance (CMOM) program designed to help optimize the performance of the sanitary sewer system. In accordance with Environmental Protection Agency (EPA) documents, the major objectives of Cahokia's CMOM program include:

1. Manage, operate and maintain at all times, all parts of the collection system so that the City of Cahokia Heights fully complies with the Clean Water Act
2. Provide sufficient capacity to convey base and peak flows without sanitary sewer overflows for all parts of the collection system
3. Implement feasible steps to stop and mitigate the impact of sanitary sewer overflows from any portion of the collection system
4. Provide timely notification of sanitary sewer overflows from the collection system to persons with reasonable potential for exposure to pollutants from such sanitary sewer overflows
5. Develop a written summary of the CMOM program and make it, and required program audits, available to the public upon request

There are no piped overflow points within the City's sanitary sewer collection system, therefore, any system overflows are related to sewer line blockages and/or excessive infiltration and inflow. When sewer line blockages occur, they are corrected and mitigated in accordance with City emergency response procedures. Generally, sewer line blockages are not directly related to wet weather conditions.

A. SANITARY SEWER SYSTEM DESCRIPTION

The City of Cahokia Heights sanitary sewer system services approximately 15 square miles of land within the City limits, serving a population of 22,000 residents according to the 2020 census. The City of Cahokia Heights sanitary sewer system is separate from the City's storm water system (there are no combined sewers in the City of Cahokia Heights).

Other significant statistics of the City of Cahokia Heights sanitary sewer system include:

1. An average annual precipitation of 42 inches

2. More than 90 miles of gravity sewers ranging in size from 8 inches to 30 inches in diameter
3. More than 4 miles of force mains
4. More than 2,000 manholes
5. Sixty-nine (69) pump stations

A copy of the Wastewater Collection System Maps for the City of Cahokia Heights and adjoining communities are included in Appendix B. Areas within the City of Cahokia Heights Sewer District are those identified as Sewer Districts C1 through C8, as well as parts of Districts E6 and E7, lying outside the City of East St. Louis corporate limits. A small portion of this system in the extreme northern part of the City (formerly known as Centreville or Centreville Township) is tributary to the collection system owned and operated by the City of East St. Louis. The rest of the system flows south to a large pump station at the south end of Cahokia Heights. Both of these systems, (Cahokia Heights and East St. Louis) pump their total flow to the American Bottoms Regional Wastewater Treatment Plant (ABRWWTP) in Sauget, IL.

Information regarding the 69 pump stations within the City of Cahokia Heights, including pump station name, location, number of pumps, pump manufacturer, and horsepower, are included in Appendix C.

All interceptor sewers and pump stations are operated and maintained by the City of Cahokia Heights.

B. SANITARY SEWER SYSTEM FUNDING

The City of Cahokia Heights's sanitary sewer system is funded by a utility fee. The utility fee provides a dedicated source of funds for the operation, maintenance, rehabilitation, and improvement of the City's sanitary sewer system.

Because the sanitary sewer utility fee is a user fee and not a tax, all properties regardless of ownership are required to pay for the services provided by the City's sanitary sewer system. This includes non-profit entities such as churches, schools and institutions, as well as properties owned by the City of Cahokia Heights, the State of Illinois, and the federal government.

In December 2021 the City approved a new Water and Sewer Ordinance No. 21-1404. Under the utility structure, all residential dwelling units and churches are charged a flat rate sewer utility fee, and all commercial and industrial customers are charged a graduated sewer utility fee based on their amount of water usage. The sanitary sewer utility charges are calculated to recover the full cost of operating, maintaining,

rehabilitating, and improving the sanitary sewer collection system.

A copy of the new Ordinance 21-1404 is included in Appendix A.

1. 6,251 customers billed
2. \$295,073 in sewer user fees billed monthly

In addition to the sanitary sewer system funding provided through utility fees, the City of Cahokia Heights also receives funding for sanitary sewer system operations, maintenance, rehabilitation, and improvement expenses from the following sources:

1. TIF funding
2. Grants

The City employs a full time Grants Coordinator to help secure grant funding. Additional sanitary sewer system funding is also anticipated from future video gaming revenues.

Projected expenditures have not been determined at the time of the writing of this plan as the annual budget for the new City is still being developed.

II. CMOM PROGRAM GUIDELINES

A. CMOM PROGRAM COMPONENTS

EPA's proposed CMOM program identifies six components that are generally necessary to meet the five performance standards identified in the Section I of this report. These components are:

1. Identify program goals consistent with the general standards
2. Identify administrative and maintenance functions responsible for implementing the CMOM program and the chain of communication for complying with reporting requirements for sanitary sewer overflows (SSOs)
3. Include legal authorities necessary for implementing the CMOM program
4. Address appropriate measures and activities necessary to meet the performance standards
5. Provide design and performance provisions
6. Monitor program implementation and measure its effectiveness

B. PROGRAM GOALS

Program goals help determine the course of action needed to set a CMOM program in motion. Goals define the purpose and desired results of the CMOM program. Goals may reflect performance, safety, customer service, resource use, compliance, and other considerations.

C. ADMINISTRATIVE AND MAINTENANCE FUNCTIONS

Responsibilities for managing and implementing CMOM program activities need to be clearly defined, documented, and communicated. Job descriptions help ensure that all employees know specific responsibilities and individuals have proper credentials. Determination of staff requirements for a collection system requires a working knowledge of the system and consideration of key variables.

D. LEGAL AUTHORITIES

In order to implement an effective CMOM program, the City must have sufficient legal authority to authorize implementation activities. The proposed CMOM provision identifies five classes of activities that EPA generally believes are necessary for implementing a CMOM program:

1. Control of infiltration and connections from inflow sources
2. Requirement that sewers and connections be properly designed and constructed
3. Ensure proper installation, testing, and inspection of new and rehabilitated sewers
4. Address flows from municipal satellite collection systems
5. Implement the general and specific prohibitions of the national pretreatment program (see 40 CFR 403.5)

E. MEASURES AND ACTIVITIES

Measures, activities and program requirements need to be tailored to the size, complexity and specific features of the collection system. The proposed CMOM provision specifically identifies ten general classes of measures and activities that are generally appropriate and applicable for most municipal sanitary sewer collection system programs. The ten general measures and activities are described below:

1. MAINTENANCE FACILITIES AND EQUIPMENT

Permittees need to provide adequate maintenance facilities and equipment. Maintenance facilities are locations where equipment, materials and personnel are dispatched and where operations records are kept. Increasingly, computer systems are used to manage maintenance records. Industry guidance recognizes that a properly planned and supported equipment yard is essential to collection system operation.

2. MAINTENANCE OF WASTEWATER COLLECTION SYSTEM MAPS

One of the most typical problems in collection system management and maintenance is determining the locations of sewer lines and manholes. Determining such locations is best done by keeping appropriate collection system maps up-to-date. Many agencies keep large paper maps divided

into overlapping, large-scale sections that can be bound into books that can be stored easily and taken into the field as needed. Maps and plans should be kept current by updating them when alterations or system additions occur.

3. USE OF TIMELY AND RELEVANT INFORMATION

Timely and relevant information plays a critical role in an effective CMOM program. A dynamic CMOM program focuses on planning, implementing, reviewing, evaluating and taking appropriate actions in response to available information. The key to these approaches is the ability to get information from staff in the field to managers. The use of timely, relevant information does not require that a computer or electronic database be used. A paper copy system to track information and data may be adequate. Regardless of the method for managing information, operators should have a written description of the procedures used, including procedures for operating and updating the system. If the system is computer-based, procedures should present any unique hardware and software requirements.

4. ROUTINE PREVENTATIVE OPERATION AND MAINTENANCE ACITIVITIES

A good preventive maintenance program is one of the best ways to keep a system in good working order and prevent service interruptions and system failures which can result in overflows and/or backups. In addition to preventing service interruptions and system failures, a preventive maintenance program can protect the capital investment in the collection system.

Preventive maintenance activities should ensure that the permittee:

- a. Routinely inspects the collection systems and addresses defects or other problems
- b. Investigates complaints and promptly corrects faulty conditions
- c. Provides maintenance records, an adequate workforce and appropriate equipment in working order
- d. Maintains and updates a schedule of planned activities

Preventive maintenance activities typically address:

- a. Planned, systematic, and scheduled inspections to determine current conditions and plan for maintenance and repairs
- b. Planned, systematic, and scheduled cleaning and repairs of the system based on past history
- c. Proper sealing and/or maintenance of manholes
- d. Regular repair of deteriorating sewer lines
- e. Remediation of poor construction
- f. A program to ensure that new sewers and connections are properly designed, inspected and constructed and new connections of inflow sources are prohibited
- g. A program to oversee lateral and private collection system installations that tie in to public wastewater collection systems
- h. A program to eliminate existing illegal inflow sources, and a strategy for informing and educating the public about such sources. Illegal inflow sources, such as sump pump discharges, rain gutters/downspouts, detached building, shed, and garage drains, swimming pool drains, and landscaping drainage, are all prohibited from entering the sanitary sewer system

5. CAPACITY OF THE COLLECTION SYSTEM

A critical function of a collection system is to provide adequate capacity for wastewater flows. The capacity needs of a collection system change as the system ages, new connections are made, and existing connections change their water usage. Identifying reserve capacity, hydraulic deficiencies, and capacity needs is critical for effective asset management. The capacity assessment program should ensure procedures exist and are implemented for:

- a. Determining whether adequate capacity exists in downstream portions of the collection system and treatment facilities that will receive wastewater from new connections
- b. Identifying existing capacity deficiencies in the collection system and at treatment facilities

Capacity assurance also implies the need to expand of the collection system due to community growth and system improvements. System improvements can include rehabilitation and replacement of sewer piping and manholes due to deterioration, as well as the need for greater conveyance capacity due to increased contribution to the system.

6. IDENTIFICATION AND PRIORTIZATION OF DEFICIENCIES AND CORRESPONDING REHABILITATION ACTIONS

Sanitary sewers are exposed to harsh internal and external environments. Structural condition assessment is a principal objective of any pipeline system inspection program and is important to cost-effective management of the collection system. The collection system agency should clearly identify the techniques used in the program, such as field inspections or closed-circuit television, identify areas of the collection system where various measures are employed, and describe criteria for identifying priorities for inspection and for correction. Efforts to rate the condition of system components can be used to help prioritize actions. Where rating systems are used for identifying the condition of individual components of the collection system, the rating system should be explained.

7. TRAINING

Collection system employees are exposed to numerous challenging conditions, and adequate training, including safety training, is necessary for employees to meet these challenges. An organized training program is a necessity, regardless of agency size. Training programs should address safety procedures and include training in general operations and maintenance procedures to ensure employees are adequately prepared to implement appropriate provisions of the CMOM program.

8. EQUIPMENT AND REPLACEMENT PARTS INVENTORIES

Providing adequate maintenance facilities and equipment typically includes a process for identifying critical parts needed for system operation, and maintenance of an adequate inventory of replacement parts. Without an adequate inventory of replacement parts, the collection system may experience extended overflow events in the event of a breakdown or malfunction including extended service outages for customers. The process for identifying critical parts can be based on a review of equipment and manufacturer's recommendations, supplemented by the experience of the maintenance staff. The amount and types of equipment and tools held by a utility depend on the size, age and condition of the system. The less corrective maintenance required and

more scheduled preventive maintenance done, the fewer emergency supplies are required to be kept in stock.

9. BACKWATER VALVES AND SUMP PUMPS

The City of Cahokia Heights requires that backwater valves be installed in building drain lines when the lowest plumbing drain in the building is lower than the top of the nearest upstream sanitary sewer manhole in order to eliminate, or substantially reduce, sanitary sewer backups. Such backwater valves are required for all new construction or changes in building ownership or title, unless the property owner signs a waiver releasing the City of any liability due to the occurrence of a sanitary sewer backup. Backwater valves must be properly installed and maintained by the property owner.

10. GREASE CONTROL PROGRAM

All commercial and industrial property owners are required to develop and implement a formal grease control program for their facilities. Each facility's grease control practices, grease control equipment, and maintenance records are subject to periodic, unannounced inspection by the City of Cahokia Heights.

F. DESIGN AND PERFORMANCE PROVISIONS

An effective program that ensures that new sewers (including building laterals/connections) are properly designed and installed can help avoid permanent system deficiencies that could create or contribute to future overflow events and/or operation and maintenance problems. Similarly, major rehabilitation and repair projects are opportunities to ensure that work is done correctly in a way that will minimize future problems. The proposed CMOM provision would require permittees to develop and implement programs to ensure:

1. Requirements and standards are in place for the installation of new collection system components and for major rehabilitation projects
2. Procedures and specifications exist for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects that are implemented

G. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

Accurate sewer performance information is an important part of improving collection system performance and is a core task of any asset management program. EPA's proposed CMOM provision would require permittees to monitor the implementation and, where appropriate, measure the effectiveness of elements of their CMOM programs. Satisfaction of this requirement typically would include identifying performance indicators to describe and track the implementation of various aspects of their CMOM programs. Performance indicators are ways to quantify and document the results and effectiveness of control efforts. Performance indicators also can be used to measure and report progress towards achieving goals and objectives and to guide management activities.

III. PROGRAM GOALS AND MISSION STATEMENT

The Mission Statement for Cahokia's Water and Sewer Department is "to prolong the life of the collection system infrastructure and transport wastewater to the point of treatment without disruption or overflows, while meeting the needs of its customers, protecting surface and ground water resources, and complying with all Federal and State regulations."

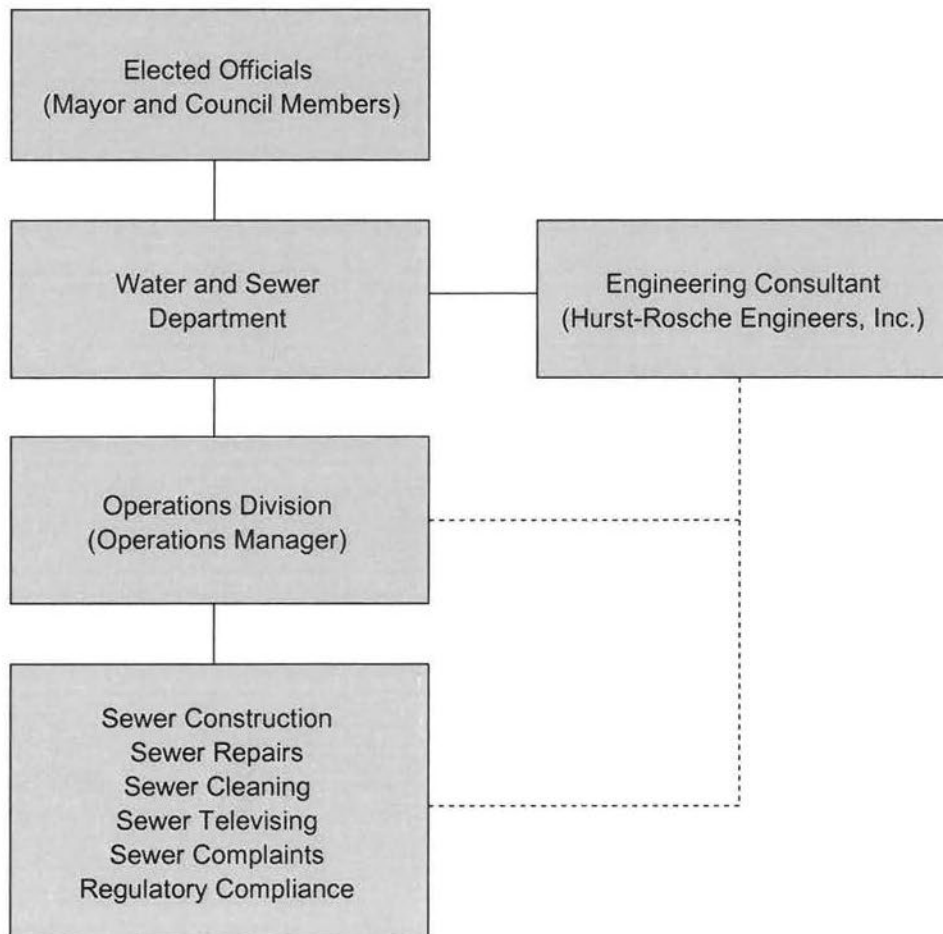
Program goals for Cahokia's Water and Sewer Department include:

1. Manage, operate and maintain the collection system to provide uninterrupted sanitary sewer service for all customers in the service area
2. Implement programs and procedures to reduce and mitigate the impact of sanitary back-ups and sewer overflows in the sanitary sewer system
3. Ensure that new sewers (including building laterals/connections) are properly designed and installed
4. Identification and prioritization of capacity and structural deficiencies in the sanitary sewer system
5. Implementation of cost-effective rehabilitation action on identified and prioritized structural or capacity deficiencies
6. Receive, document, and respond to all customer complaints or problems relating to the sanitary sewer system. Response on backups and overflows shall be within 2-hours of the report of the incident. Response on all other complaints or problems shall be within 72 hours of the report of the incident
7. Provide timely notification of sanitary sewer overflows from the collection system to all persons with reasonable potential for exposure to pollutants from such sanitary sewer overflows
8. Comply with all state and federal regulations pertaining to the sanitary sewer system
9. Develop a written summary of the CMOM program and make it, and required program audits, available to the public

IV. ADMINISTRATIVE AND MAINTENANCE FUNCTIONS

A. ORGANIZATIONAL CHART

A sanitary sewer utility requires good organization and competent staff to provide the quality services demanded by its customers. To facilitate this effort, the City has developed an organizational structure designed to be responsive to the needs of its customers while being fiscally responsible at the same time. The organizational chart presented below depicts the decision making hierarchy for the City of Cahokia Heights Water and Sewer Department.



B. STAFFING PLAN

The Water and Sewer Department is staffed during the hours of 8:30 A.M. to 4:30 P.M. on Monday through Friday. Calls to the Water and Sewer Department after normal working hours are routed to the after hours call center. The call center then contacts the Water and Sewer Department to respond to any reported problems. To insure quick, reliable notification of a problem, mobile telephones are carried by the on-call staff.

C. SPECIFIC STAFFING

The City of Cahokia Heights Water and Sewer Department is staffed by a total of seven (7) full-time employees organized by specific duties, including a full time Superintendent, a department manager, and four full time office workers. All operations staff assigned to the operation and maintenance of the sanitary sewer system are supervised by the Operations Manager.

The Water and Sewer Department staff is also supported by a part-time electrician from the City's Electrical Department, as well as additional manpower from Street and Parks Department employees as needed.

Engineering staff from the City's engineering consultant, Hurst-Rosche Engineers, Inc., East St. Louis, Illinois provides engineering support for the operation, maintenance, rehabilitation, replacement, and improvement of the sanitary sewer system.

The Water and Sewer Department's Administrative Staff also provides support by answering, documenting, and forwarding any phoned in complaints regarding the sanitary sewer system to the appropriate operations staff.

D. RECORD KEEPING

There are a myriad of record keeping activities associated with the operation and maintenance of a sanitary sewer utility. Therefore, accurate and complete record keeping is crucial. Equally important are the mechanisms for archiving and retrieving the collected data.

Historically, the system has been set up for manual, hard copy, records. Recently, more and more of this data is kept in digital format.

Currently, the City of Cahokia Heights keeps records on many activities, including the following:

1. Wastewater collection system maps

2. Sewer system inspections
3. Manhole inspections
4. Pump station inspections
5. Manhole replacement information
6. Pump station repair information
7. Sewer replacement information
8. Sewer point repair information
9. Sewer televising data
10. Sewer lining information
11. Sanitary sewer overflow data
12. Sanitary sewer system complaint forms

Copies of the wastewater collection system maps, manhole inspection sheets, pump station inspection checklist, and sanitary sewer system complaint forms are included in Appendices E, G, H, and I respectively.

E. EMERGENCY RESPONSE PROCEDURES

The City of Cahokia Heights's Emergency Response Plan contains procedures and contingency plans to respond to emergencies throughout the City, including emergencies affecting the City's sanitary sewer system. The Emergency Response Plan takes into consideration vulnerable points in the sewer system, severe natural events, failure of critical system components, and vandalism or third party events.

Effective emergency management planning requires considerable coordination and forethought. There are various types of emergencies and/or disasters that can have a very negative impact on the operation of the sanitary sewer system.

When a dry weather sanitary sewer back-up occurs, sewer cleaning equipment is used to clean the blocked sewer. If that effort is unsuccessful, internal closed circuit television equipment is used to inspect the line to determine the exact nature of the obstruction. If more aggressive cleaning or root removal won't solve the problem, emergency underground utility locates are requested and the area is excavated to make the

necessary repair.

When wet weather sanitary sewer overflows or basement back-ups occur, the Operations Staff check the downstream collector and interceptor sewers to see if they are surcharged. If the downstream collector and interceptor sewers are surcharged, the line with the sanitary sewer overflow or basement back-up will be flagged for further inspection.

The Emergency Response Plan includes an up-to-date list of the names, titles, phone numbers, and responsibilities of emergency response personnel, including Water and Sewer Department staff and Fire Department response teams. Work crews have immediate access to tools and equipment necessary to respond to emergency situations, including containment equipment and supplies (booms, inlet covers, etc.) to protect the storm drainage system.

Water and Sewer Department staff receive awareness training on responding to emergency situations, including notifications to the Illinois Emergency Management Agency, the St. Clair County Health Department, and the local drinking water authorities (the Columbia Water Department, Illinois American Water Company, and/or the City of Cahokia Heights Water Department) as appropriate.

Should any workplace accidents occur, they will be investigated by the Mayor's office. Any findings resulting from accident investigations will be incorporated into the employee training program.

The City's Emergency Response Plan is updated on an as needed basis, and was last updated in December 2021. A copy of the Emergency Response Plan is on file at the City of Cahokia Heights Water and Sewer Department.

F. SANITARY SEWER OVERFLOW (SSO) NOTIFICATION

The City of Cahokia Heights is proactive in working to prevent releases of sanitary sewage into the environment. However, it is not possible to prevent all such events, and therefore, the City of Cahokia Heights has adopted a Chain of Communication for Reporting Sanitary Sewer Overflows which outlines the following public notification protocol:

1. Contact local Illinois Environmental Protection Agency (IEPA) office within 24- hours of the event, and submit a Sanitary Sewer Overflow or Bypass Notification Summary Report within 5 days of the occurrence. The contact number for the local IEPA office is (618) 346-5120
2. Post sign(s) where appropriate at the site of a release event immediately upon discovery and confirmation of such an event and leave them up for

up to one (1) week after the source of the release has been corrected to warn affected parties of potential health hazards associated with the SSO

The "Sanitary Sewer Overflow or Bypass Notification Summary Report" will contain the following information:

1. Location of the SSO
2. Receiving water body, if any
3. Estimate of the volume of the SSO.
4. A description of the sewer system component from which the release occurred, including, but not limited to, manholes, pipe, and pipe cracks
5. Estimated date and time when the SSO began and stopped or will be stopped
6. Cause or suspected cause of the SSO
7. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the SSO

In addition, a Targeted Dry Weather SSO Plan for three specific areas of known SSO issues has been submitted in December 2021 to the USEPA for approval, and elements of that plan will be compared with and incorporated into this CMOM when approved.

A copy of the Sanitary Sewer Overflow or Bypass Notification Summary Report is included in Appendix G.

V. LEGAL AUTHORITIES

Proper control of the sanitary sewer system includes establishing appropriate ordinances to provide regulatory/legal authority to insure optimal performance and compliance with pertinent regulatory requirements. Applicable ordinances include sewer rate ordinances establishing the cost of service, and sewer use ordinances regulating the use of public and private sewers within the City of Cahokia Heights.

A. SEWER RATE ORDINANCES

December 2021 the City approved a new Water and Sewer Ordinance No. 21-1404, establishing the current sanitary sewer utility fees. Under the utility structure, all residential dwelling units and churches are charged a flat rate sewer utility fee, and all commercial and industrial customers are charged a graduated sewer utility fee based on their amount of water usage. The sanitary sewer utility charges are calculated to recover the full cost of operating, maintaining, rehabilitating, and improving the sanitary sewer collection system. Copies of Water and Sewer Ordinance No. 21-1404 is included in Appendix A

B. SEWER USE REQUIREMENTS

December 2021 the City approved a new Water and Sewer Ordinance No. 21-1404, regulating the use of public and private sewers and drains, private sewage disposal, the installation and connection of building sewers, the discharge of water and wastes into the public sewer system and providing penalties for violation thereof, and the levying of charges for wastewater services (user charges). A copy of Ordinance No. 21-1404, including applications for sewer permits, is included in Appendix A.

The following sewer use requirements are included in Ordinance No. 21-1404

1. Procedures for inspection standards, pretreatment requirements, and building/sewer approval
2. General prohibitions for fire and explosion hazards, oil, petroleum, corrosive materials, and obstructive materials
3. Substances prohibited by the sewage treatment plant
4. Procedures and enforcement actions for fats, oils, and grease

5. The restriction of storm water connections to the sanitary sewer system

In addition, the City of Cahokia Heights utilizes the Standard Specifications for Water and Sewer Construction in Illinois to establish sewer use requirements for the City. Requirements that sewers and connections be properly designed and constructed, and that new or rehabilitated sewers are properly installed, tested, and inspected, are covered under the Standard Specifications for Water and Sewer Construction in Illinois.

A copy of the Standard Specifications for Water and Sewer Construction in Illinois is available from the Illinois Society of Professional Engineers, 100 East Washington Street, Springfield, Illinois 62701.

D. WASTEWATER TREATMENT

All of Cahokia's wastewater is treated at the American Bottoms Wastewater Treatment Plant in Sauget, Illinois. Under the City of Cahokia Heights's agreement with American Bottoms, the City's Sewer Use Ordinance is linked to, and in compliance with, the American Bottoms' POTW Pretreatment Program.

VI. MEASURES AND ACTIVITIES

A. MAINTENANCE FACILITIES AND EQUIPMENT

Adequate maintenance of the sanitary sewer system relies on the availability of equipment and parts. Maintenance facilities are locations where equipment, materials and personnel are dispatched and where operations records are kept. Industry guidance recognizes that properly planned and supported equipment facilities are essential to collection system operations.

1. Equipment

The City has the following equipment assigned to the operation and maintenance of the sanitary sewer system:

- a. Two Combination Jet- Vactor Trucks
- b. Three Back Hoes
- c. One Dump Truck
- d. Six Pick-Up Trucks with Tools
- e. One Boom Truck
- f. Three Trash Pumps

2. Maintenance Facilities

The City self-performs its own maintenance of and coordination for replacement of the City's sanitary sewer system maintenance equipment. The following specific functions are performed for the City's sanitary sewer system maintenance equipment:

- a. Perform preventive maintenance and repairs at proper intervals
- b. Evaluate, rehabilitate and modify equipment to include minor accident damage
- c. Oversee outside fueling services

- d. Administer a repair record system
- e. Evaluate equipment replacement and administer the bidding process for purchasing new equipment
- f. Train City personnel on the proper operation of new equipment

B. MAINTENANCE OF WASTEWATER COLLECTION SYSTEM MAPS

One of the most typical problems in collection system management and maintenance is determining the locations of sewer pipes and manholes. Determining such locations is best done by keeping appropriate collection system maps up-to-date. Maps and plans should be kept current by updating them when alterations or system additions occur.

Accurate sewer mapping is a fundamental requirement for any Sewer Utility. This mapping allows staff to do a variety of activities including: 1) answer questions from current and potential customers; 2) visually establish system performance trends; 3) track maintenance and rehabilitation activities; and 4) facilitate the orderly extension of sewer service.

The wastewater collection system maps are carried in the vehicles used by the Operations Division Staff assigned to sewer system maintenance. The maps carried by Operations Division Staff are annotated with corrections as discrepancies are discovered.

A copy of the Wastewater Collection System Maps for the City of Cahokia Heights and adjoining communities are included in Appendix B. Areas within the City of Cahokia Heights Sewer District are those identified as Sewer Districts C1 through C7

C. USE OF TIMELY AND RELEVANT INFORMATION

Timely and relevant information plays a critical role in an effective CMOM program. A dynamic CMOM program focuses on planning, implementing, reviewing, evaluating and taking appropriate actions in response to available information. The key to these approaches is the ability to get information from the field staff.

The Water and Sewer Department maintains the following databases to ensure the use of timely, relevant information. These include:

- 1. Wastewater collection system maps

2. Sewer system inspections
3. Manhole inspections
4. Pump station inspections
5. Manhole replacement information
6. Pump station repair information
7. Sewer replacement information
8. Sewer point repair information
9. Sewer televising data
10. Sewer lining information
11. Sanitary sewer overflow data
12. Sanitary sewer system complaint forms

D. ROUTINE PREVENTATIVE OPERATION AND MAINTENANCE ACTIVITIES

A good preventive maintenance program is one of the best ways to keep a system in good working order and prevent service interruptions and system failures which can result in overflows and/or backups. In addition to preventing service interruptions and system failures, a preventive maintenance program can protect the capital investment in the collection system. The primary goal of this CMOM is to develop a program to help insure optimal operation of the utility.

Cahokia's Sanitary Sewer Utility's Preventive maintenance activities include:

1. Routinely inspect the collection system and address defects or other problems
2. Investigate complaints and promptly correct faulty conditions
3. Provide maintenance records, an adequate workforce, and appropriate equipment in working order

4. Maintain and update a schedule of planned activities
5. Preventive maintenance activities

Sewer system inspections, including detailed manhole and pump station inspections, inspections for infiltration and inflow sources, and cleaning of the City's sewer system, are performed on an as needed basis. Manhole and Pump Station Inspection Sheets are completed for each inspection and copies are retained in the City of Cahokia Heights Water and Sewer Department.

Pump stations are inspected every other day, including weekends, and operation logs are maintained for all pump stations. The pump station pumps are serviced and calibrated on an annual basis through "draw-down" tests or equivalence to verify pumping capacities. A warning light is provided on each pump station control panel to indicate malfunctioning equipment and/or alarm conditions. Portable electrical generators are available in the event power is disrupted at any of the City's pump stations, and temporary pumps and hoses are available to bypass a pump station if necessary.

Emergency operating procedures are available for each pump station, and any pump station failures and/or overflows are responded to by Water and Sewer Department personnel. Off hour/emergency notifications are provided through the City after hours call center..

The Water and Sewer Department also regularly inspects the route of all force mains to assess force main conditions. Air release/vacuum valves are inspected and maintained on an as needed basis.

All pump station and/or force main failures are investigated by the Water and Sewer Department, and any necessary actions are implemented to prevent future failures.

The City maintains a record of all sanitary sewer system complaints received by the City and the results of their investigation/resolution. This information provides a useful tool in planning future sewer repairs and/or replacements.

E. CAPACITY OF THE COLLECTION SYSTEM

The Cahokia Water and Sewer Department routinely reviews the capacity of the City's sanitary sewer system to assess the future needs of the system, including:

1. Identifying growth areas and develop population projections to assess the capacity of the collection system to serve the future needs of the community

2. Determine the sewer routing and sizing of interceptor sewer extensions which will best serve the identified growth areas

Assessing projected wastewater flows and proposed sewer system infrastructure requirements for Cahokia's undeveloped areas include:

1. Collecting information and field survey data
2. Reviewing existing sanitary sewer conditions and capacity
3. Identifying improvements to correct deficiencies in the existing sanitary sewer system
4. Estimating construction costs
5. Evaluating financing alternatives

F. IDENTIFICATION AND PRIORTIZATION OF DEFICIENCIES AND CORRESPONDING REHABILITATION ACTIONS

The Water and Sewer Department's pipe televising and manhole inspection efforts and associated sanitary sewer system repairs and rehabilitation activities are prioritized using the following criteria:

1. Threat to public safety (sinkholes in streets, etc.)
2. Threat to public health (loss of sewer service, basement back-ups, etc.)
3. The severity of structural defects (manholes, etc.)

G. TRAINING

The City of Cahokia Heights has a comprehensive safety program to insure that the work environment for City employees is a safe and healthy one. Training, including new employee training, is provided in the normal hazards associated with the general construction industry such as backhoe/loader use, basic electrical safety, fall protection, flagger safety, ladder safety, blood borne pathogens, material safety data sheets (MSDS), confined space entry, hydrogen sulfide hazards, etc. The City is also considering implementing Hazardous Waste Operations and Emergency Response (HAZWOPER) Awareness Training for City personnel involved in sewer and/or pump station inspections and/or maintenance. The safety program is designed to protect the

general public during the normal course of operating and maintaining the system.

Training of the Water and Sewer Department staff is an ongoing process. Safe work practices are reviewed at the start of each task, taking into consideration the risks associated with each activity, and preventative measures to mitigate those risks.

Water and Sewer Department staff also receive awareness training on responding to emergency situations, including notifications to the Illinois Emergency Management Agency, the St. Clair County Health Department, and the local drinking water authorities (the Columbia Water Department, , Illinois American Water Company, and/or the City of Cahokia Heights Water Department) as appropriate.

Should any workplace accidents occur, they will be investigated by the Mayor's office. Any findings resulting from accident investigations will be incorporated into the employee training program.

H. EQUIPMENT AND REPLACEMENT PARTS INVENTORIES

The Water and Sewer Department maintains a spare parts inventory for its sewer maintenance equipment and materials required for sanitary sewer repairs. The Water and Sewer Department maintains a spare parts inventory for the Jet-Vactor Trucks, as well as an inventory of sewer pipe, precast concrete manhole parts, adjusting rings, and manhole frames/covers commonly used in sanitary sewer system repairs.

I. BACKWATER VALVES AND SUMP PUMPS

The City of Cahokia Heights requires that backwater valves be installed in building drain lines when the lowest plumbing drain in the building is lower than the top of the nearest upstream sanitary sewer manhole in order to eliminate, or substantially reduce, sanitary sewer backups. Such backwater valves are required for all new construction or changes in building ownership or title, unless the property owner signs a waiver releasing the City of any liability due to the occurrence of a sanitary sewer backup. Backwater valves must be properly installed and maintained by the property owner.

Sump pumps must also be properly installed and maintained by the property owner, and the sump pump discharge piping may not be connected to the City's sanitary sewer system.

Information regarding backwater valves and sump pumps is included in Appendix H.

J. GREASE CONTROL PROGRAM

All commercial and industrial property owners within the City of Cahokia Heights are expected to conduct their operations in such a manner that grease is captured on the user's premises and properly disposed of. Commercial and industrial property owners are required to develop and implement a grease control program for their facilities. Each facility's grease control practices, grease control equipment, and maintenance records are subject to periodic, unannounced inspection by the City of Cahokia Heights.

VII. DESIGN AND PERFORMANCE PROVISIONS

The City of Cahokia Heights utilizes the Standard Specifications for Water and Sewer Construction in Illinois. These standards establish acceptable materials and practices for the design and construction of additions and improvements to the City of Cahokia Heights's sanitary sewer system. These standards apply to both public and private sanitary sewers and to sanitary sewer laterals.

A plumbing permit and connection fee are required for all new sanitary sewer lateral construction and any repairs or replacements of sanitary sewer laterals. The City Water and Sewer Department inspects all new sanitary sewer laterals, any lateral repairs, and any lateral replacements.

An Illinois Environmental Protection Agency (IEPA) construction permit must be obtained on all new public and private sanitary sewer construction. The City reviews all proposed sanitary sewer plans and specifications to determine compliance with the City's sanitary sewer standards before authorizing its approval on the IEPA permit application.

Additionally, the City engineering consultant inspects and certifies that the new sanitary sewer was built in accordance with the approved plans and specifications. Internal televised pipe inspections and manhole inspections are performed on all new sanitary sewer installations. Any pipe or manhole defects identified must be corrected before the City will assume ownership of the sewer.

VIII. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

The City of Cahokia Heights Water and Sewer Department documents the following activities/ items for the sanitary sewer collection system:

1. Sewer pipe and manhole cleaning efforts
2. Internal televising and manhole inspection efforts
3. Root removal efforts
4. Grease removal efforts
5. Dry weather reported blockages and basement back-ups
6. Wet-weather sanitary sewer overflows and basement back-ups
7. Cured-in-place sewer lining rehabilitation efforts
8. Pipe and manhole repair efforts
9. Compliance with the City's backwater valve and sump pump installation requirements

Appendix A

Water and Sewer Ordinance No. 21-1404

ORDINANCE NO. 21-1404

AN ORDINANCE AMENDING AND ADOPTING ORDINANCE NO. 1158 AND AN ORDINANCE AMENDING ORDINANCE NO. 969, ENTITLED AN ORDINANCE AMENDING ORDINANCE NO. 627, 721, 807, 843 AND 903 ENTITLED " AN ORDINANCE REGULATING THE USE OF PUBLIC AND PRIVATE SEWERS AND DRAINS, PRIVATE SEWAGE DISPOSAL, THE INSTALLATION AND CONNECTION OF BUILDING SEWERS, THE DISCHARGE OF WATER AND WASTE INTO THE PUBLIC SEWER SYSTEM AND PROVIDING PENALTIES FOR VIOLATIONS HEREOF; THE LEVYING OF CHARGES FOR WASTEWATER SERVICES (USER CHARGES)", AND FIXING THE METER RATES AND WATER SERVICE CHARGES AND THE SEWER SERVICE CHARGES OF THE CITY OF CAHOKIA HEIGHTS, ILLINOIS

WHEREAS, the City of Cahokia Heights, Illinois operates and maintains a Waterworks System for furnishing of water supplied to water users in the City of Cahokia Heights, Illinois;

WHEREAS, the City of Cahokia Heights, Illinois operates and maintains public and private sewers and drains and private sewage disposal, installation and connection of building sewers, discharge of waters and waste into public sewer systems in the City of Cahokia Heights; and

WHEREAS, the Village of Cahokia passed Ordinance No. 1158 on February 15, 2011; and

WHEREAS, the City of Cahokia Heights, Illinois wishes to amend and adopt Ordinance No. 1158 to include other fees; and

WHEREAS, it is in the best interest of the City of Cahokia Heights that Ordinance No. 1158 be amended and adopted.

NOW THEREFORE, BE IT ORDAINED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF CAHOKIA HEIGHTS, ST. CLAIR COUNTY, ILLINOIS AS FOLLOWS:

Section 1. That Ordinance No. 1158 of the Village of Cahokia is adopted as an ordinance of the City of Cahokia Heights.

Section 2. That Ordinance No. 1158 of the City of Cahokia Heights is hereby amended to include the following service charges and fees as follows:

Deposit (Resident)	\$ 75.00
Processing fee (Water area)	\$ 40.00
Meter Tampering Charge	\$100.00
Recheck shut-offs – back on	\$100.00
Broken Lock Charge	\$ 75.00
Broken Shut-off Valve Charge	\$100.00
Fire Hydrant Rental Fee (plus water at metered rates)	\$ 50.00
Broken Riser Charge	\$100.00
Disconnect water @ main	\$400.00
Dig (disconnect) up sewer @ main	\$500.00
Initial Connection free; and 2 nd Trip (depending on circumstances)	\$ 40.00
Meter Testing Charge (Customer request/nothing wrong with meter)	\$ 75.00
Second Tampering Charge (in one instance)	\$200.00
All Business Deposit Fee	\$200.00
Illegal usage is calculated by average gallons used (add sewer if we service both)	
Returned Check Charge	\$ 50.00
Lien Release Charge	\$120.00
Jumper Removal Fee	\$100.00
Stolen Meter Charge	\$350.00
Crimp off @ main	\$400.00
Call-out after house customer problem	\$150.00
Water taps over 1" (Time and material) Varies	
Sewer Tap Fee	\$750.00

Section 2. That conflicting ordinances or pertinent portions thereof in effect at the time this ordinance takes effect are hereby repealed.

Section 3. This ordinance shall take effect from and after its passage, approval and publication by pamphlet all as provided by law.

THIS ORDINANCE PRESENTED to the City Council this 13 day of
DECEMBER, A.D. 2021

	<u>AYE</u>	<u>NAY</u>
Pearce	<u>Y</u>	<u> </u>
VanMeter	<u>Y</u>	<u> </u>
Jethroe - Franklin	<u>R</u>	<u> </u>
Liddell - Ware	<u>Y</u>	<u> </u>
McCallum	<u>E</u>	<u> </u>
Weeden	<u>Y</u>	<u> </u>
Haywood	<u>Y</u>	<u> </u>
Townsend	<u>Y</u>	<u> </u>

APPROVED by the Mayor of the City of Cahokia Heights, Illinois this 13 day of
DECEMBER, A.D. 2021.

Ex. 6 (Personal Privacy)

MAYOR

ATTEST:

Ex. 6 (Personal Privacy)

CITY CLERK

STATE OF ILLINOIS)
COUNTY OF ST. CLAIR)

CERTIFICATION

The undersigned City Clerk does herewith certify that the attached is a true and correct copy of the Ordinance duly adopted by the Mayor and City Council of the City of Cahokia Heights at a meeting of the City Council held on the 13 day of DECEMBER, 2021.

Ex. 6 (Personal Privacy)

CITY CLERK

Appendix B

Wastewater Collection System Maps

Appendix C

Pump Station Information

No.	P.ump Station Name	Pump Station Location (Nearest Intersection)	Num ber,	Pump Manufacturer	Pump Horsepower Priority
1	Cooper Dr.	Ex. 7f (Water Infra.)	2		40
2	Station 5		2		40
3	Blue Water Lane		1		10
4	DePaul		1		10
5	Donald St.		2		3
6	Edgar St.		1		5
7	Ellen Ex. 7f (Water Infra.)		2		3
8	Ex. 7f (Water Infra.)		2		3
9	Ex. 7f (Water Infra.)		1		3
10	Miskell Blvd.		2		3
11	Shack		1		5
12	Station SA		1		3,4
13	Bruce St.		2		3
14	Carol Street		2		3
15	Hissrich		2		3
16	Hutchings St.		2		3
17	100 Block of Judith		2		3
18	Margaret Dr.		1		5
19	Mississippi Ave. (Ex. 7f (Water Infra.))		1		3
20	Ex. 7f (Water Infra.) & David St.		1		3
21	Mississippi Ave. & Ex. 7f (Water Infra.)		1		3
22	St Christopher		2		3
23	Williams Ex. 7f (Water Infra.)		1		5
24	Ex. 7f (Water Infra.)		1		4
25	Paris		1		3
26	Rieber		1		3
27	William Ex. 7f (Water Infra.)		1		3
28	Wasington		1		10

29	Ex. 7f (Water Infra.)	Ex. 7f (Water Infra.)	1		3
30	Monica				
31	Ex. 7f (Water Infra.)		2	Gorman-Rupp	2.7
32	51st		2	Gorman-Rupp	7.5
33	53rd		2	KSB	3.4
34	63rd		2	Roots	5
35	71st		2	Roots	3
36	73rd		2	Roots	5
37	73rd		2	Roots	5
38	75th		2	Roots	2
39	75th		2	Roots	1.5
40	82nd		2	Roots	7.5
41	82nd		2	Roots	7.5
42	Beachland		2	Roots	3
43	Bridgedale		2	Gorman-Rupp	3
44	Ex. 7f (Water Infra.)		2	Flyght	7.5
45			2	Barnes	4.5
46	Creston Drive		2	Flygt	3
47	Ex. 7f (Water Infra.)		2	KSB	3.4
48	I.C. Tracks		2	Grundfos	5.5
49	Ex. 7f (Water Infra.)		2	Gorman-Rupp	3
50	Lake Drive Pill Box		2	Gorman-Rupp	3
51	Ex. 7f (Water Infra.)		2	Gorman-Rupp	5
52	Ex. 7f (Water Infra.)		2	Fairbanks Morse	5
53	Mousette Lane		2	Barnes	1.5
54	Superior		2	Crown	7.5
55	Ex. 7f (Water Infra.)		2	Gorman-Rupp	3
56	Walnut				
57	Missouri Ave.				
58	Market St.				
59	Market St.				
60	42nd St.				
61	Jackson				

Ex. 7f (Water Infra.)

62	feiffer	Ex. 7f (Water Infra.)			
63	. 46th St.				
64	Golden Road				
65	Ex. 7f (Water Infra.) Park				
66	Central Ex. 7f (Water Infra.)				
67	Ex. 7f (Water Infra.)				
68	Ex. 7f (Water Infra.)				
69	1600 Block Jerome			Diversion	

Appendix D

Manhole Inspection Sheet

MANHOLE INSPECTION SHEET

CLIENT: _____

NOTE TAKER: _____

FACILITY: _____

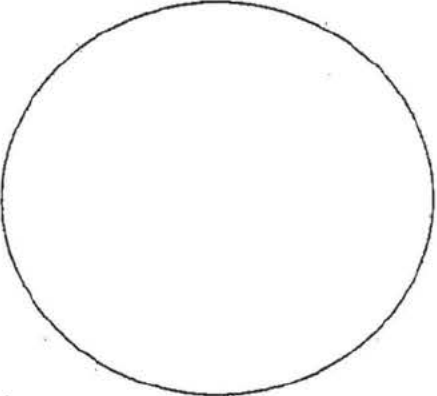
INSPECTOR: _____

PROJECT NO. _____

WEATHER: _____

STRUCTURE ID: _____

TIME: _____ DATE: _____

NORTH EAST ELV. T/R	FLOW PATTERN
<p>MH LOCATION: _____</p> <p>MH DEPTH: _____ MH STEPS: GOOD _____ FAIR _____ POOR _____</p> <p>MH LID: SUBJ. TO INUNDATION: YES _____ NO _____ INFLOW _____ SOLID _____ VENTED _____ INFLOW _____ BROKEN _____ MISSING _____ INFLOW _____</p> <p>MH RING: GOOD _____ BROKEN _____ MISSING _____</p> <p>MH WALLS: BRICK _____ PRECAST _____ OTHER _____</p> <p> DEBRIS ON MH WALLS: HEAVY _____ LIGHT _____</p> <p> ROOTS IN WALLS _____ INFILTRATION _____</p> <p> PAST SURCHARGING _____ HEIGHT ABOVE INVERT _____</p> <p> DETERIORATED WALLS _____ INFILTRATION _____</p> <p> HOLE IN MH WALLS _____ INFILTRATION _____ INFLOW _____</p> <p> CRACK IN MH WALLS _____ INFILTRATION _____ INFLOW _____</p> <p> HOLE IN MH CONE _____ INFILTRATION _____ INFLOW _____</p> <p> CRACK IN MH CONE _____ INFILTRATION _____ INFLOW _____</p> <p> OTHER DEFECTS _____ INFILTRATION _____ INFLOW _____</p> <p>MH BENCH: DETERIORATED _____ INFILTRATION _____ INFLOW _____</p> <p> SEDIMENT ON BENCH: HEAVY _____ MEDIUM _____ LIGHT _____ TYPE _____</p> <p> OTHER: _____</p> <p>MH INVERT: DETERIORATED _____ INFILTRATION _____ INFLOW _____</p> <p> SEDIMENT IN INVERT: HEAVY _____ MEDIUM _____ LIGHT _____ TYPE _____</p>	 <p>DEPTH OF FLOW: _____</p>

LINE DESCRIPTION												
LINE NUMBER:	1			2			3			4		
LINE SIZE												
MATERIAL	PVC	HDPE	OTHER	PVC	HDPE	OTHER	PVC	HDPE	OTHER	PVC	HDPE	OTHER
DEPTH FROM MP TO FL												

GENERAL COMMENTS:

Appendix E

Pump Station inspection Checklist

PUMP STATION INSPECTION CHECKLIST

CITY OF CAHOKIA HEIGHTS WATER AND SEWER DEPARTMENT

Pump Station Name: _____ Inspection Date: _____
Pump Station Location: _____ Inspected By: _____
Number of Pumps: _____
Pump Manufacturer: _____
Pump Horsepower: _____

WETWELL:

- ☐ Inspect interior and exterior surfaces
- ☐ Check for proper access hatch operation
- ☐ Verify float system operating condition
- ☐ Inspect pump guide rails

PUMPS:

- ☐ Pull and reset pump (if needed)
- ☐ Check for ease of removal and proper sealing at disconnect flange
- ☐ Check pump chords for obstructions
- ☐ Check pump for normal operation
- ☐ Check for unusual noises and/or vibration

VALVE VAULT:

- ☐ Check sump pump operation
- ☐ Verify pressure gauges are in place (if applicable)
- ☐ Check for proper access hatch operation

CONTROL PANEL:

- ☐ Verify that wiring schematic is on file in Sewer Department Office
- ☐ Inspect enclosure for damage
- ☐ Inspect wiring
- ☐ Perform operational test
- ☐ Verify that electrical conduits are sealed
- ☐ Verify high water warning light operation

COMMENTS: _____

Appendix F

Sanitary Sewer System Complaint Form

City of Cahokia Heights Water & Sewer Dept.

Report # _____

Sanitary Sewer Problem Reported

(circle)

AM

Person receiving call: _____ Date _____ Time _____ PM

Customers Name: _____

Address: _____

Ask the customer the following questions:

1. What is the location of the backup on the property or home? _____
2. Was the washing machine draining before backup started? _____
3. When did the sewer problem start? _____
4. Have you previously reported this same problem? _____ (if yes) Who did you report it to and when did you report it? _____
5. Is there backup in the basement? _____ (if yes) about how much water? _____
6. Is the water clear? _____

Weather Conditions:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cont. Rainfall	<input type="checkbox"/> Widespread Flooding
<input type="checkbox"/> Groundwater Infiltration	<input type="checkbox"/> Snow Melt	<input type="checkbox"/> Storms	
Complaint Results:	<input type="checkbox"/> Cust. Problem	<input type="checkbox"/> Broken Sewer	<input type="checkbox"/> Equipment Failure
<input type="checkbox"/> Other (explain below)	<input type="checkbox"/> Power Outage	<input type="checkbox"/> Blocked Line	

Person Responding to work order: _____

Action Taken: _____

Date and Time Resolved

Date:

Time

If sewage overflow occurs, this problem must be reported to the IEPA within 24 hours of the occurrence!**Contact: Wayne Coffman @ 618-346-5125 Fax Number 618-346-5155**

Mailing Address: Bureau of Water/Compliance Assurance Section-MC #19

1021 North Grand Avenue East

P.O. Box 19276

Springfield, IL 62794-9276

Date and Time Reported to Bureau

Date:

Time

(If no contact is made, you must leave voice mail and fax report)

Type of Contact: Agents Name _____

Put a copy of work order in the customers file and in report binder. (Clerks Int.) _____

Appendix G

Sanitary Sewer System Overflow or Bypass Notification Summary Report



Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Sanitary Sewer Overflow or Bypass Notification Summary Report

- Within 24 hours of the occurrence, notify the Illinois EPA regional wastewater staff by telephone, FAX, email or voice mail, if staff are unavailable.
- Within 5 days of the occurrence, provide a written report describing the overflow or bypass, including all information requested on this form. The permittee is required to submit this form or other equivalent written notification to the Illinois EPA at:

Bureau of Water/Compliance Assurance Section - MC #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

NOTE: You may complete this form online, save a copy locally, print, sign and submit it to the BOW/CAS MC #19, at the above address. You may also print the form before completing it by hand, signing and submitting it.

Failure to notify the Illinois EPA as specified may result in fines up to \$10,000 for each day of violation.

Instructions: Use this form to report all unscheduled sanitary sewer overflow or bypass occurrences. Attach additional information as necessary to explain or document the overflow or bypass. For the purpose of this report, an overflow or bypass is defined as the discharge of untreated sewage from the sanitary sewer collection system to a surface water and/or ground due to circumstances such as those identified by the check boxes in the overflow or bypass details section of this form.

Use one form per occurrence. A single occurrence may be more than one day if the circumstances causing the overflow or bypass results in a discharge duration of more than 24 hours. If there is a stop and restart of the overflow or bypass within 24 hours, but it is caused by the same circumstances, report it as one occurrence. If the discharges are separated by more than 24 hours, they should be reported as separate occurrences.

24 Hour Notification Information

Permittee (Municipality or Facility Name): _____ Permit Number: _____ Person Representing Permittee Who Contacted IEPA: _____

Date: _____ Time: ☐ AM ☐ PM IEPA Office Contacted: _____ Name of IEPA Employee Contacted: _____

Sanitary Sewer Overflow or Bypass Details

Date and Duration of Overflow or Bypass Occurrence (complete a separate form for each occurrence):

Start Date: _____ Time: ☐ AM ☐ PM Duration of the overflow or bypass (hours and minutes): _____

Estimated Volume of
Wastewater
Discharged
(gallons):

WWTP Flow During bypass (report in
MGD): Not applicable for a collection
system SSO.

Location of the Overflow or Bypass: _____

Circumstances Causing the Overflow or Bypass (check all that apply)

WPC 733
11/2011

☐ Rain ☐ Power Outage ☐ Equipment Failure ☐ Other (explain below)
☐ Snow Melt ☐ Broken Sewer ☐ Widespread Flooding

Provide a narrative description to further explain why the overflow or bypass occurred. For example, describe what equipment failed. What caused the power outage, or what plugged the sewer. Flooding should only be indicated, as a cause if there is significant flooding that is caused by high river, stream, or lake water levels, not just localized high water in the street.

Wet Weather (if applicable)

Date(s) and Duration of Rainfall:

Start Date: _____ Time: _____ AM PM _____ End Date: _____ Time: _____ AM PM _____ Amount of Rainfall (inches) _____ Amount of Snow Melt (inches) _____

Contributing Soil Conditions (saturated, frozen, soil type) _____

Where Did the Discharge from the Overflow or Bypass Go? (check all that apply)

Provide the name of the local receiving water that the wastewater enters, which could be a nearby stream, river, lake, or wetland. If discharge does not enter directly into surface water, but indirectly by way of a ditch or storm sewer, trace the path of the ditch or storm sewer to find the receiving water.

- ☐ Runs on ground and absorbs into the soil
- ☐ Ditch: Name of surface water it drains to: _____
- ☐ Storm Sewer: Name of surface water it drains to: _____
- ☐ Surface water direct discharge: _____
- ☐ Basement Back-ups, (Number & use (i.e.residential, commercial) of buildings affected): _____
- ☐ Other, describe: _____

Actions to Correct This Occurrence and Prevent Future Overflows or Bypasses

Describe what actions were taken to minimize the volume of wastewater discharged from the overflow or bypass reported on this form. Also describe what actions are planned to prevent or minimize future overflows or bypasses. Illinois law and NPDES permits prohibit overflows or bypasses, unless certain specified conditions are met. Sanitary sewer overflows and bypasses may be the subject of enforcement action.

Report Completed By

Contact Person: _____
Street Address: _____
PO Box: _____
City: _____ State: _____
Zip Code: _____ Phone: _____
County: _____

Authorized Representative Contact Information

Contact Person: _____
Title: _____
Street Address: _____
PO Box: _____
City: _____ State: _____
Zip Code: _____ Phone: _____
County: _____

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Authorized Representative Name (Print)

Title

Authorized Representative Signature

Date

Appendix H

System, Backwater Valve, and Sump Pump Information

A Member of the International Code Family™



INTERNATIONAL PLUMBING CODE®

2003

CHAPTER 1 ADMINISTRATION

SECTION 101 GENERAL

101.1 Title. These regulations shall be known as the *International Plumbing Code* of [NAME OF JURISDICTION] hereinafter referred to as "this code."

101.2 Scope. The provisions of this code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing systems within this jurisdiction. This code shall also regulate nonflammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems and sanitary and condensate vacuum collection systems. The installation of fuel gas distribution piping and equipment, fuel gas-fired water heaters and water heater venting systems shall be regulated by the *International Fuel Gas Code*. Provisions in the appendices shall not apply unless specifically adopted.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.
2. Plumbing systems in existing buildings undergoing repair, alteration, or additions, and change of occupancy shall be permitted to comply with the *International Existing Building Code*.

101.3 Intent. The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems.

101.4 Severability. If any section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

SECTION 102 APPLICABILITY

102.1 General. The provisions of this code shall apply to all matters affecting or relating to structures, as set forth in Section 101. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

102.2 Existing installations. Plumbing systems lawfully in existence at the time of the adoption of this code shall be permitted to have their use and maintenance continued if the use, maintenance or repair is in accordance with the original design and no hazard to life, health or property is created by such plumbing system.

102.3 Maintenance. All plumbing systems, materials and appurtenances, both existing and new, and all parts thereof, shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. All devices

or safeguards required by this code shall be maintained in compliance with the code edition under which they were installed.

The owner or the owner's designated agent shall be responsible for maintenance of plumbing systems. To determine compliance with this provision, the code official shall have the authority to require any plumbing system to be reinspected.

[EB] 102.4 Additions, alterations or repairs. Additions, alterations, renovations or repairs to any plumbing system shall conform to that required for a new plumbing system without requiring the existing plumbing system to comply with all the requirements of this code. Additions, alterations or repairs shall not cause an existing system to become unsafe, insanitary or overloaded.

Minor additions, alterations, renovations and repairs to existing plumbing systems shall be permitted in the same manner and arrangement as in the existing system, provided that such repairs or replacement are not hazardous and are approved.

[EB] 102.5 Change in occupancy. It shall be unlawful to make any change in the occupancy of any structure that will subject the structure to any special provision of this code without approval of the code official. The code official shall certify that such structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.

[EB] 102.6 Historic buildings. The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings when such buildings or structures are judged by the code official to be safe and in the public interest of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of buildings.

102.7 Moved buildings. Except as determined by Section 102.2, plumbing systems that are a part of buildings or structures moved into or within the jurisdiction shall comply with the provisions of this code for new installations.

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 13 and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Where the differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements.

102.9 Requirements not covered by code. Any requirements necessary for the strength, stability or proper operation of an existing or proposed plumbing system, or for the public safety, health and general welfare, not specifically covered by this code shall be determined by the code official.

(k_s), in accordance with the manufacturer's specifications and as modified for aging roughness factors with deposits and corrosion.

TABLE 713.11.3
STACK SIZES FOR PRESSURE STERILIZERS
 (Number of Connections of Various Sizes Permitted
 To Various-sized Vent Stacks)

STACK SIZE (Inches)	CONNECTION SIZE			
	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "
$1\frac{1}{2}$ ^a	3 or	2 or	1	—
$1\frac{1}{2}$ ^b	2 and	1	—	—
2 ^a	6 or	3 or	2 or	1
2 ^b	3 and	2	—	—
2 ^b	2 and	1 and	1	—
2 ^b	1 and	1 and	—	1
3 ^a	15 or	7 or	5 or	3
3 ^b	1 and	1 and 5 and	2 and —	2 1

For SI: 1 inch = 25.4 mm.

a. Total of each size.

b. Combination of sizes.

714.3.2 Slope of horizontal drainage piping. Horizontal drainage piping shall be designed and installed at slopes in accordance with Table 704.1.

SECTION 715 **BACKWATER VALVES**

715.1 Sewage backflow. Where the flood level rims of plumbing fixtures are below the elevation of the manhole cover of the next upstream manhole in the public sewer, such fixtures shall be protected by a backwater valve installed in the building drain, branch of the building drain or horizontal branch serving such fixtures. Plumbing fixtures having flood level rims above the elevation of the manhole cover of the next upstream manhole in the public sewer shall not discharge through a backwater valve.

715.2 Material. All bearing parts of backwater valves shall be of corrosion-resistant material. Backwater valves shall comply with ASME A112.14.1, CSA B181.1 or CSA B181.2.

715.3 Seal. Backwater valves shall be so constructed as to provide a mechanical seal against backflow.

715.4 Diameter. Backwater valves, when fully opened, shall have a capacity not less than that of the pipes in which they are installed.

715.5 Location. Backwater valves shall be installed so that access is provided to the working parts for service and repair.

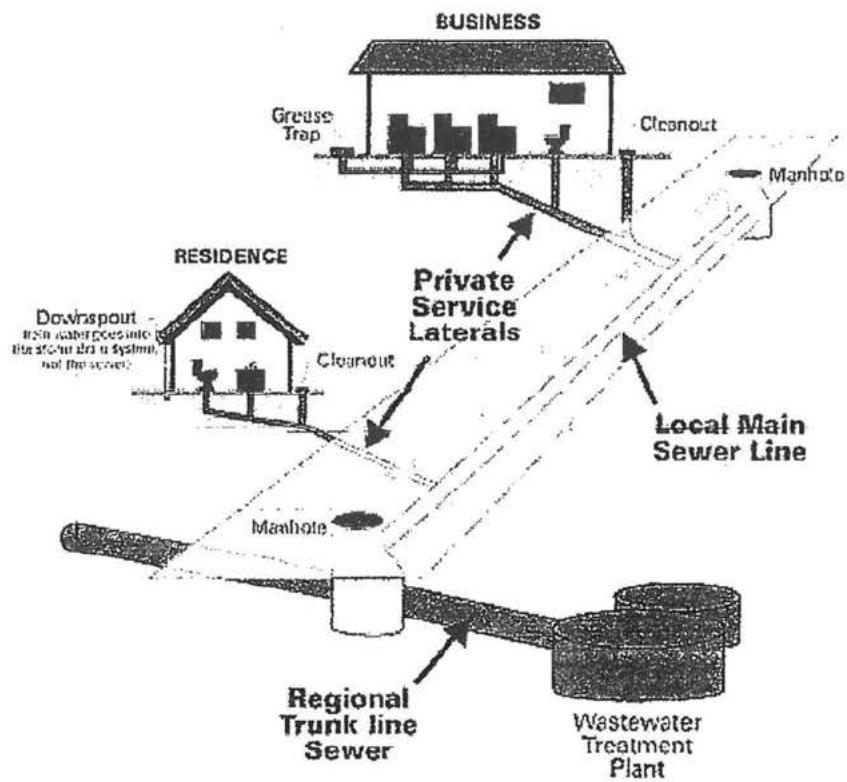
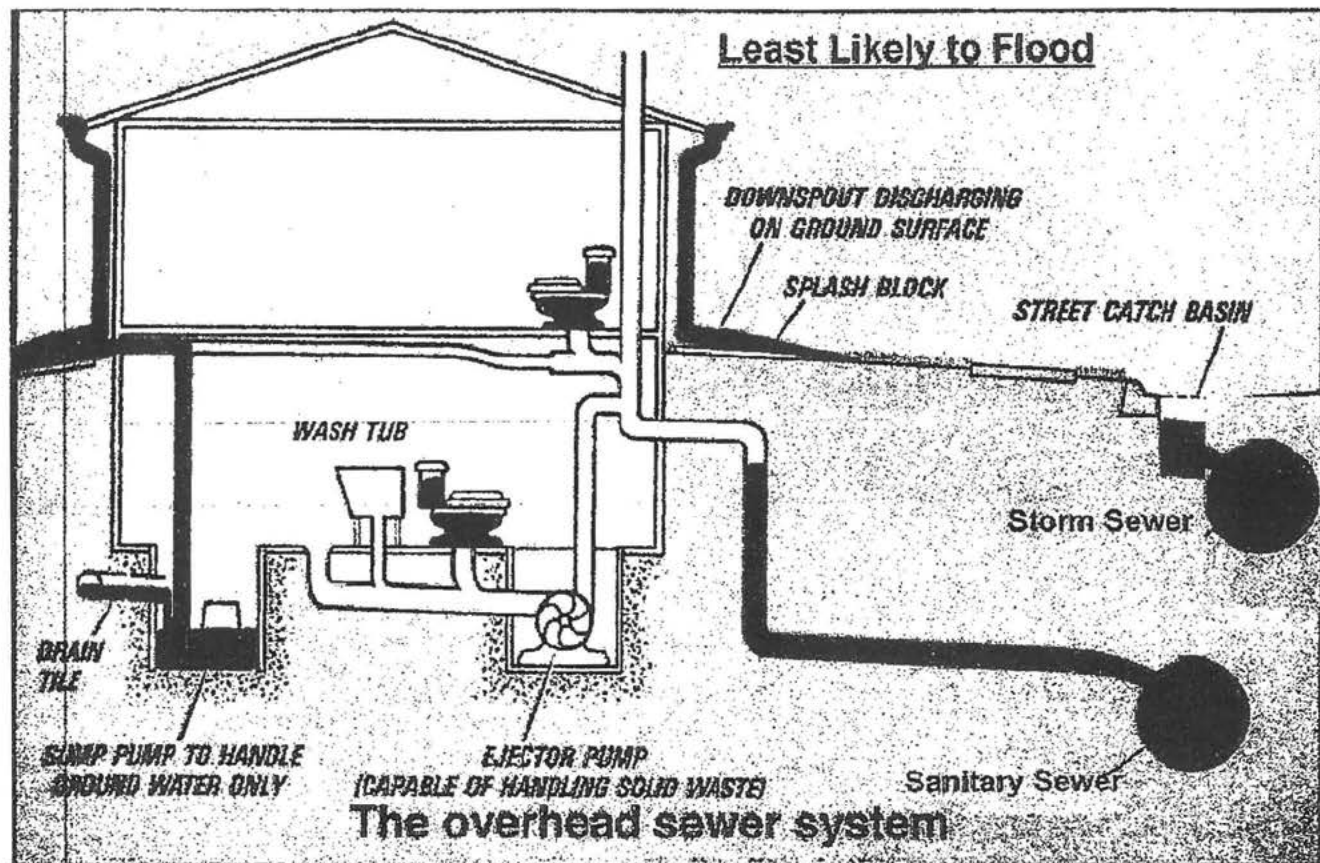
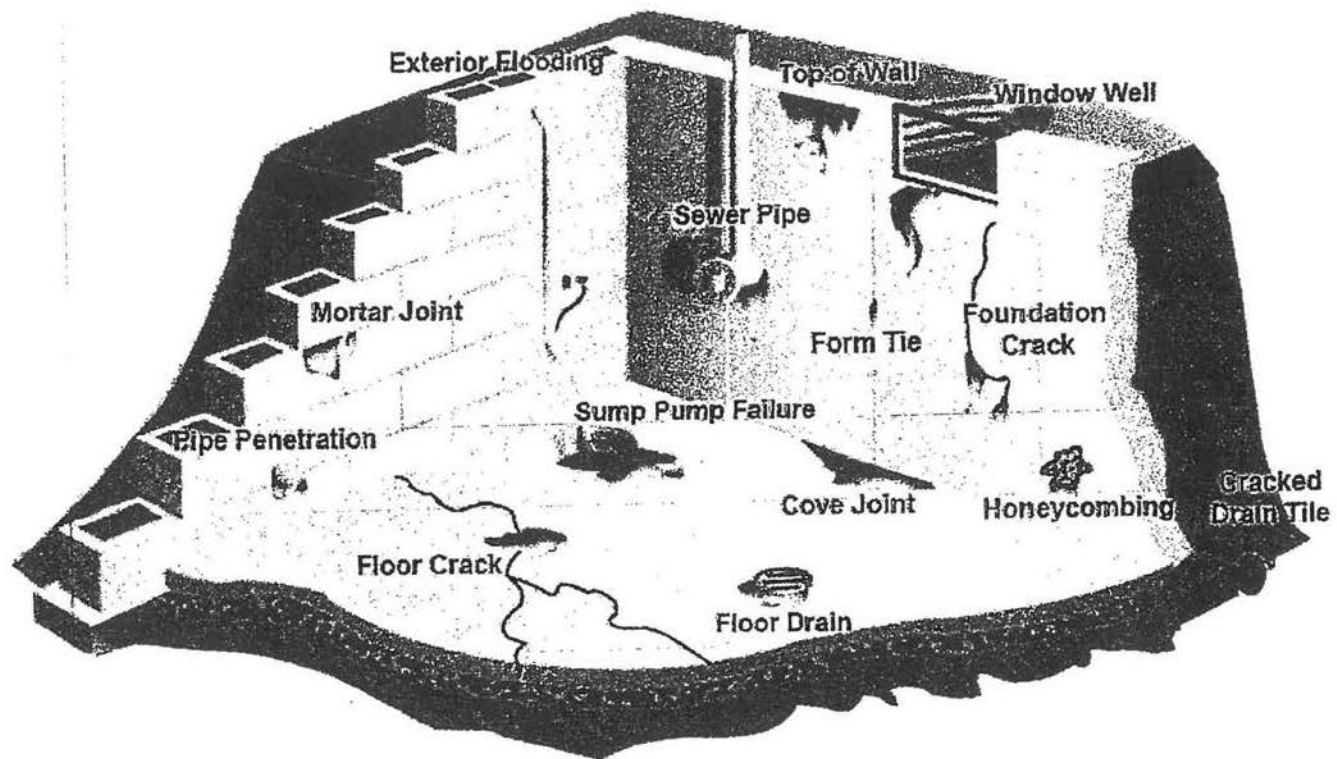
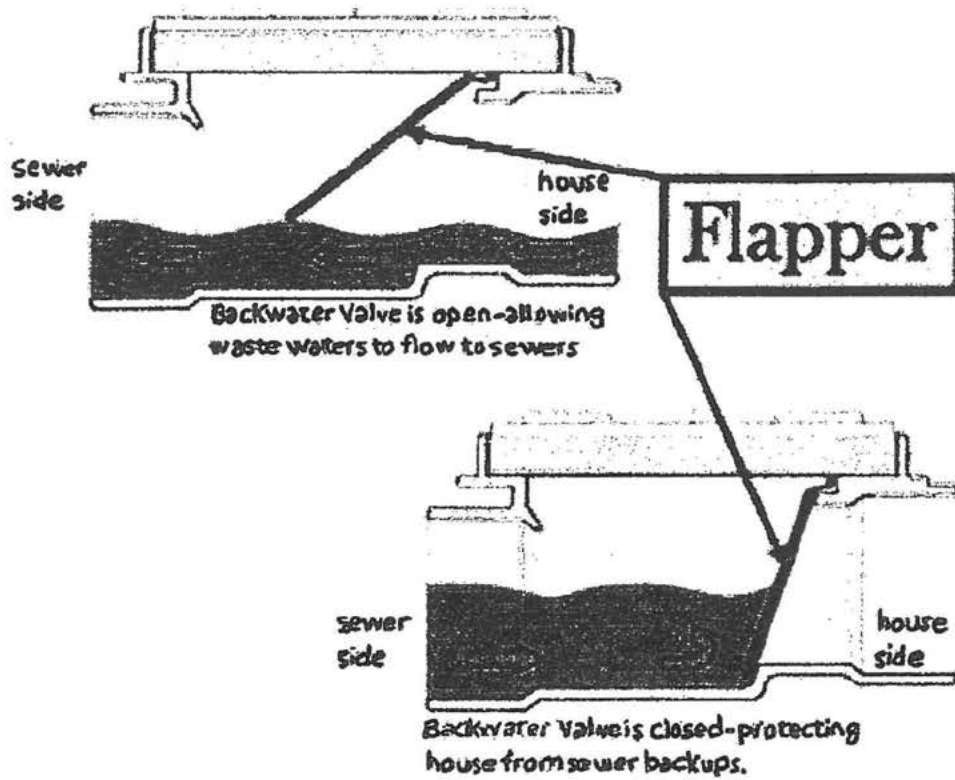


Diagram of a sanitary sewer system

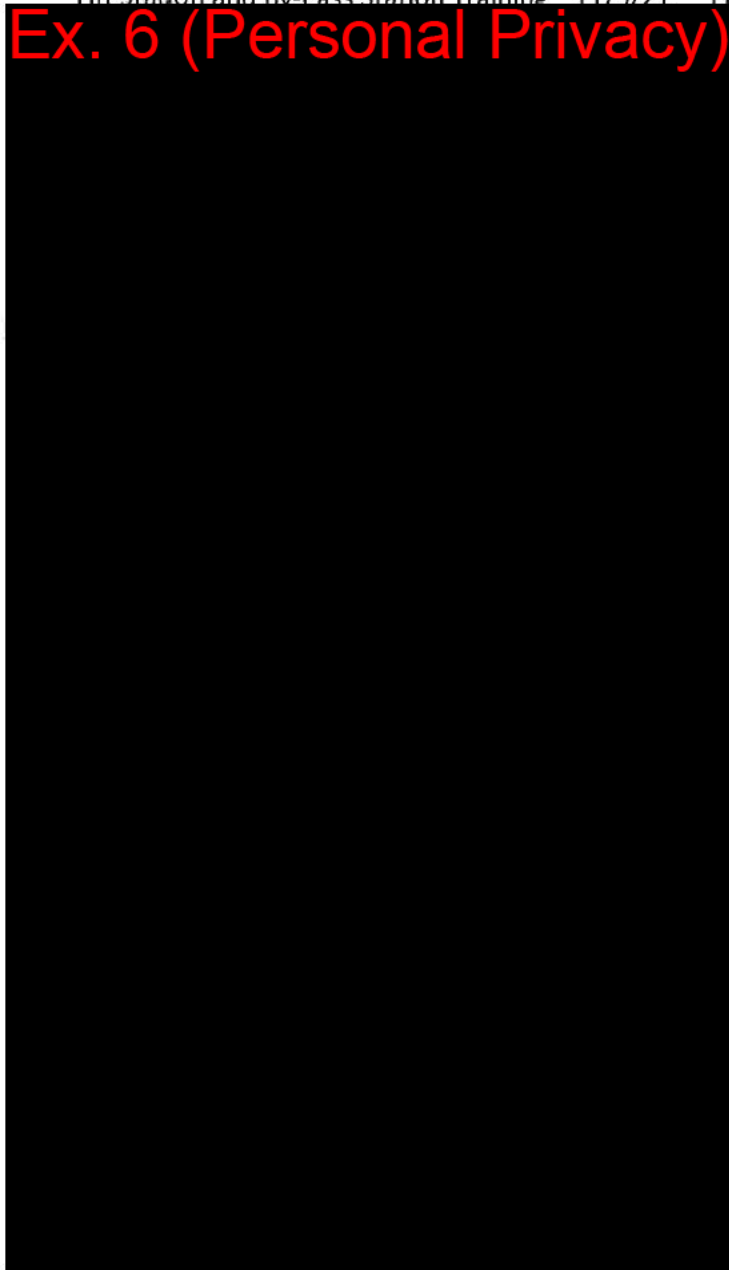




How a Backwater Valve Works



Ex. 6 (Personal Privacy)



A series of horizontal lines, likely representing a list or table structure, extending across the right side of the page. There are 18 lines in total, with the first 15 lines being closely spaced and the last 3 lines being more widely spaced.



**City of Cahokia Heights
Water and Sewer Department
900 Upper Cahokia Road
Cahokia, Illinois 62206
(618) 337-2149
Richard Duncan, City Clerk**

Curtis McCall Sr, Mayor

February 11, 2022

City of Cahokia Heights updated list of Employees in the Sewer Department :

Dennis Traiteur – Director

Sharlin Pfeffer – Assistant Director

Kerchavian McCall – Water/Sewer Foreman

Patrick Belk – Sewer Laborer

James Culpepper – Sewer Laborer/Operator

Phillip McIntyre – Sewer Laborer/Operator

Jason McMath - Sewer Laborer

Greg Radford - Sewer Laborer

Sean Sayles- Sewer Laborer/Operator

Joshua Ware – Sewer Laborer